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SUICIDAL BEHAVIOR AMONG PHYSICIANS REFERRED FOR FITNESS-FOR-DUTY EVALUATION

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INTRODUCTION

“The problem of physician suicide is not solely a matter of whether or not it takes place at a rate higher than the general public. That a professional caregiver can fall ill and not receive adequate care and support, despite being surrounded by other caregivers, begs for a thoughtful assessment to determine why it happens at all.”

Legha (2012)

Decades ago, when physicians were unrealistically idealized as strong and invincible, it was suggestedⁱ that those who died by suicide may have been unsuited to medical practice. Since the 1970s, as Legha has described, a more humanistic emphasis is evolving that acknowledges those ideals as unrealistic, recognizes the vulnerabilities of medical practitioners and promotes wellness as prevention. Rates of suicide among male physicians are modestly higher and suicide rates for female physicians are much higher than among the general populationⁱⁱ. Knowledge about and access to effective suicide methods may explain the higher rates among doctorsⁱⁱⁱ. Although there is now evidence^{iv} that appropriate treatment for substance use disorders in physicians often results in return to safe and successful practice, little data exists on the identification of physicians at risk for suicide.

We report here on a retrospective analysis of subsequent suicide attempts and completions among physicians who participated in a fitness-for-duty assessment (FFD) at the Vanderbilt

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Comprehensive Assessment Program (VCAP). All of these physicians were referred by the Tennessee Medical Foundation (TMF), due to concern about a variety of behavioral health issues that adversely affected safe clinical practice. TMF, the state physician health program, provided access to long-term outcome and clinical practice behaviors of the physicians we evaluated.

METHOD

This study was approved by the Institutional Review Board of Vanderbilt University, which mandates that clinical data be appropriately de-identified for confidentiality. Using a standardized assessment protocol that follows the American Psychiatric Association (APA) guidelines^{ix}, Vanderbilt Comprehensive Assessment Program (VCAP) has evaluated over 500 physicians from 39 of the United States and 4 Canadian provinces since 2001. Of these, we had access to follow-up information on 141 physicians, evaluated between 2001 and 2009, who were referred to VCAP and subsequently followed by the TMF.

Each physician referral for FFD is empirically placed into one of five categories based upon information received from referral sources prior to evaluation: 1-Disruptive Behavior (e.g. demeaning or intimidating others); 2- Sexual Boundary Violation (e.g. inappropriate sexual touching); 3- Substance Use Issues; 4- Mental Health Issues; 5 – other or undetermined reason.

The clinical and psychological testing methods employed in VCAP FFD evaluations have been previously described in detail^x. Briefly, data from the comprehensive evaluations consist of demographics, historical findings, consensus diagnosis, psychological testing results, treatment recommendations, and fitness to practice determinations. With the exception of age, all of the demographic, historical diagnosis, and recommendation variables in this report were nominal in nature. Therefore, frequency distributions (counts, %) were used to summarize those data. Chi-Square Tests with a Fisher Exact Test supplement for small cell sizes were used to compare the group of physicians engaging in suicidal acts versus the remainder of the physicians in our sample. Continuous data (e.g., age) were summarized using means and standard deviations for the normally distributed large samples; median with minimum and maximum values summarized the small group for suicide attempters. Mann-Whitney Tests were used for those group comparisons. In general, an uncorrected alpha of 0.05 ($p < 0.05$) was used for each of the group comparisons. If group comparisons consisted of more than two categories (e.g., primary reason for referral) and the overall test was statistically significant, a Bonferroni-corrected alpha was used for post-hoc tests conducted to determine specifically which of the categories differed between the two groups. We caution readers that our low base-rate of suicide behavior in combination with the many comparisons conducted for this report creates significant risk for type I error, but we feel this risk is warranted to posit variables for further research scrutiny in relation to physician suicide.

RESULTS

Our convenience sample consisted of 141 Tennessee physicians referred for FFD (2001 – 2009) by TMF, the state physician health program, and for whom information about suicidal behavior up to 2013 was available. Seven (4.9%) of these 141 physicians evaluated at VCAP were known to have subsequently attempted suicide: of these, five died as a result. Two of the deaths occurred within the first month after FFD, and three between the second and seventh years post-FFD. This represents an alarmingly high (3.5%) suicide death rate among physicians referred for FFD assessment.

Demographic, Practice, and Historical/Clinical Variables

Depression (43%) was the most common historical diagnosis. No reports of significant head injury were elicited on routine questioning. As summarized in Table 1, 4 of the 7 (57%) physicians with suicidal behavior reported past mental health issues at FFD, compared to 21 of 134 (16%) of those in the remaining (non suicidal behavior) group (Bonferroni-corrected, $p < 0.05$). None of those 7 physicians were referred for disruptive behavior compared to approximately 38% (51 of 134) of the physicians who did not subsequently display suicidal behavior (Bonferroni-corrected, $p < 0.05$).

Of note, and statistically significant, 5 of the 7 (71%) physicians in the suicide behavior group were engaged in solo practice versus 37 (31%) of the remaining 134 (Table 2). There were more often monitoring agreements in place with TMF prior to FFD for those physicians with subsequent suicide behavior (5 of 7, 71% vs. 30 of 132, 23%, $p < 0.05$) (Table 3).

Psychometric Tests Results

Summaries and comparisons of the Personality Assessment Inventory (PAI)^{xi} validity scales, clinical scales, and supplemental Suicide Potential Indices revealed no clinically or statistically significant differences between the two groups (using a standard cut off score for clinical elevation on the PAI of $T \geq 65$). Similar comparison of Minnesota Multiphasic Personality Inventory (MMPI-2)^{xii} clinical scale scores and Beck Depression Inventory (BDI)^{xiii} scores did not yield any clinically or statistically significant differences between those physicians with suicidal behavior and the other group.

Assessment findings

The complex diagnoses of those physicians with subsequent suicidal behavior included 5 diagnosed with a Mood Disorder (71% compared to 39% of the other physicians, Fisher's Exact Test, $p = 0.095$). Four of those five had comorbid Substance Use Disorders: benzodiazepines ($n=4$), alcohol ($n=3$) and opiates ($n=2$). Two had co-morbid Bipolar and Substance Use Disorders. One had Major Depression. Six of the 7 received a personality trait ($n=4$) or disorder ($n=2$) diagnosis. Two had sexual boundary issues. Mild cognitive impairment was suspected in three cases but only diagnosed in one case, which was unrelated to controlled substance use. Six (86%) of these 7 physicians were considered to be unfit to continue to practice medicine at evaluation compared to 87 of 127 (69%) of the other group ($p < 0.05$). Three of the 5 physicians who died by suicide were known to be

under investigation by state, federal or health insurance investigators for improper prescribing of controlled substances.

Every physician with subsequent suicidal behavior received recommendations for formal treatment following evaluation, such as hospitalization, detoxification, residential treatment or outpatient psychiatric treatment, compared to 66% (N=89 of 134) in the remainder. We were unable to confirm whether the suicidal behavior group had followed specific recommendations made for remediation at evaluation, but their compliance was characterized by the physician health program as poor.

DISCUSSION

Referrals to VCAP originate from state physician health programs, medical boards, hospitals and practice groups. The goals of evaluation are to clarify the identified behavior that may be inconsistent with safe practice and to diagnose the physician and recommend remedial therapy where appropriate. VCAP does not evaluate Vanderbilt physicians. Despite its descriptive nature, longitudinal data on 141 physicians available from TMF created a unique opportunity to study the outcomes of physicians who had been referred for comprehensive FFD evaluations.

We examined our data to find indicators predictive for suicide, but found little evidence among the extensive interviews, questionnaires, analysis of the battery of psychometric testing, or the self-report scales. Hence, a major finding reported here is that these traditional assessment tools alone do not effectively predict physician suicide risk. Our study suggests that certain demographic and practice variables, fitness-for-duty findings, poor compliance with therapeutic recommendations, and possibly dependence on benzodiazepine medications may provide clues for anticipating suicide in physicians, but this requires replication in larger samples.

Solo practice

It seems plausible that the degree of social isolation associated with solo medical practice makes it easier for illness in a physician to go unrecognized. The relative lack of peer support and scrutiny, in not being part of a group or joining hospital medical staff, may increase risk for physician suicide because symptoms that can suggest a physician is becoming unsafe may be less often recognized or intervened upon. Furthermore, individuals in solo practice may incur more financial stress to support their practice, may be less likely to carry personal health insurance, less likely to consult a personal physician, and possibly be less able to take needed vacations in order to “recharge their batteries”^{xiv}

PHP monitoring

Fully five of the seven subjects in the suicide behavior group already had established support with TMF before evaluation. It is doubtful that being monitored and supported by the physician health program engendered fear and additional stress. The failure to avert physician suicidal behavior seems more likely due to the shame and stigma surrounding mental health and substance use issues, which prevent seeking help and cooperating with treatment and support. The help-avoidant, treatment-non-compliant nature of pre-suicidal

behavior in our physician sample seems a more plausible explanation of outcome than ineffective or aversive aspects of physician monitoring. Perhaps the physician who is unable to avoid detection but does manage to avert support and monitoring may be more malignantly ill and at greater risk for suicide.

Suicide

The rate (3.5%) of completed suicide in this group of physicians referred for FFD evaluation is alarmingly high, some 175 times higher than the comparable rate of 0.02% in the general population of Tennessee (2006–2010)^{xv}. Individuals with history of prior suicide attempts are more likely to engage in future suicidal behavior^{xvi}, but only 2 of our 7 subjects indicated prior attempts during the evaluation process. Although Schernhammer^{xvii} found higher suicide ratios for female physicians in the general population, female physicians (8.2% versus 25.3% female physicians in active practice in Tennessee^{xviii}) were underrepresented in our TMF sample.

Smith et al^{xix}, studying suicide in chart reviews of 244 veterans with matched depressed controls, emphasized the need to improve suicide risk assessment and to devise more effective prevention strategies. Their finding that most of those dying of suicide had denied suicidal ideation when assessed even within a week prior to suicide death parallels our experience with physicians. Unfortunately, physicians often require coercion to participate in FFD evaluation, which may involve the potential for discipline by the referral source, and may not want to indicate or minimize psychopathology. A 1980 Oregon study^{xx} also reported high rates of suicide among physicians who appeared before the medical board for possible license probation. They are arguably at greater risk than those physicians who electively seek appropriate care.

Simon et al^{xxi} suggested that response to item 9 of the PHQ---9 for depression may identify outpatients at increased risk of suicide attempt or death. The excess risk in their study emerged over several days and continued to grow for several months, suggesting that suicidal ideation may be enduring vulnerability rather than a short-term crisis.

Sedative hypnotic use

Non-medical benzodiazepine use, including benzodiazepine use disorder and self-prescribing, was more frequent in our physician suicidal behavior group. Rates of alcohol and other substance use disorders were similar in both groups. The association of benzodiazepines with physician suicide parallels the Gold et al^{xxii} study of 31,636 suicide deaths on the National Violent Death Reporting System (2003–2008). They identified 203 physician suicides and observed that being older and having job problems were much more likely among physicians, in contrast to non-physician suicides, for whom bereavement or relationship crisis was more frequently associated with suicide. Sedative-hypnotic drugs were significantly more frequently present in post mortem physician suicides than in non-physician suicides, although the presence of benzodiazepines in post-mortem physician suicides in their study did not differentiate between therapeutic, toxic intent, or recreational use that may have led to impaired judgment.

Prescription drug abuse was also a strong independent indicator of suicidal behavior in a study of 324 random suicide deaths among depressed patients in the Veterans Health Administration Health System^{xxiii}. Rates of suicidal ideation among illicit drug users averaged 9%, but were highest for those abusing sedative-hypnotic drugs (20.9%)^{xxiv}. Benzodiazepine use has also been linked to increased suicide among the elderly^{xxv}.

The long-term use of benzodiazepine is associated with worse outcomes in substance use disorders, in comorbid mental illness^{xxvi}, in panic disorder^{xxvii}, and in posttraumatic stress disorder^{xxviii}. The chronic use of benzodiazepine agents for anxiety disorders remains controversial^{xxix}, confounded by the difficulty to distinguish between severe withdrawal effects and symptoms of anxiety.

Unfit for practice

Only one of the seven physicians in the subsequent suicide behavior group was determined to be fit to practice medicine. The primary reasons for unfit determinations included ongoing substance abuse (5), persistent manic symptoms (2) cognitive impairment (2), and sexual misconduct (1).

Treatment recommendations

The physicians in our suicide behavior group reportedly failed to comply with the specific treatment recommendations made at evaluation, such as hospital admission, detoxification, outpatient care and state physician health program follow up. The impairment of judgment, or “pseudo-dementia^{xxx},” associated with chronic benzodiazepine use may help to explain the poor compliance. As Lader^{xxxi} has observed, “Only when the medication is discontinued does the person realize that their feelings and performance have been sub-optimal.”

Sargent^{xxxii} has described the psychological barriers that inhibit physicians seeking help. He included omnipotence fantasies, illness denial, self-medication and treatment avoidance, all of which inhibit the recognition and rational management of the pre-suicidal state in physicians.

Aasland^{xxxiii} hypothesized three factors operative in physician suicide: an unbalanced mental state, an unbearable social situation (job related) and easy access to the means of suicide. Myers^{xxxiv} has elaborated on the help avoidance behavior that is characteristic of suicidal physicians and also described the shunning effect upon their bereaved families related to stigmatization by the medical profession.

Limitations

This retrospective investigation is limited by the extremely unbalanced sample sizes (very small sample of confirmed suicide cases), as well as the imprecise, unsystematic quality of follow up information and the forensic nature of the FFD evaluative relationship. Disparity of group sizes is an accepted reality of this sort of comparative methodology and may be unavoidable when dealing with an event as rare as completed suicide. Nevertheless, our small but unique sample of physician outcome following comprehensive FFD evaluation offers tentative, but potentially vital clues to the health of physicians.

CONCLUSION

When a physician who is ill or becomes impaired loses his/her job identity and social role s/he can experience a level of devastation that may not easily be overcome. Having to cease practice is a damaging blow to the self-esteem, identity, and psychological wellbeing. Difficulty adapting to the loss of established role, with consequent embarrassment, avoidance, and drastic lifestyle change may only amplify the physician's mental health problems. Socially supportive contact with individuals during the course of everyday practice (including with patients) may be suddenly absent. Financial concerns, including overhead expense, cost of care, lack of insurance or denied benefits are real and present obstacles to treatment. The physician may additionally be involved in hearings and action with the state medical board and/or proceedings in criminal and civil courts, further increasing psychological distress and deterioration of already weakened coping strategies.

We need better strategies to identify pre-suicidal physicians and improve retention in treatment and rehabilitation. Our incapacitated colleagues need access to health care that is supportive and confidential, plus assistance to cover practice obligations. Our profession could mobilize to decrease the stigmatization of mental health problems. The intense shame and stigma, particularly associated with mental health and substance use issues, prevents many physicians from seeking care, unless they are coerced. The physician's personality, the physician role and the culture of practice often discourage elective participation in the role of patient. Better education, emphasizing physician wellness for students and trainees may help diminish the endemic shame about behavioral health that persists in our profession^{xxxv}.

Although our observations require confirmation, signs of mental illness or incapacity, or impending Board censure, particularly in a physician using benzodiazepines or working in isolation should alert their providers to increased risk for suicide. We cannot afford to lose physicians whose careers can be salvageable. When Middleton (2008) poignantly described the grief, guilt and self-criticism that she experienced following the suicide death of her medical colleague and friend^{xxxvi}, she suggested,

“All of us as physicians also have a responsibility to contribute to a professional culture that, instead of stigmatizing and isolating, is instead affirming and supportive.”

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Table 1

Primary Reason for Referral

	Total (N=141)	No Attempt (N=134)	Attempt (N=7)	<i>p</i> -value
	N (%)	N (%)	N (%)	
Primary Reason for Referral				<i>0.012</i>
Disruptive Behavior *	51 (36.2)	51 (38.1)	0 (0.0)	
Sexual Boundary Issues	36 (25.5)	34 (25.4)	2 (28.6)	
Substance Use Disorder	24 (17.0)	24 (17.9)	0 (0.0)	
Mental Health *	25 (17.7)	21 (15.7)	4 (57.1)	
Other	5 (3.5)	4 (3.0)	1 (14.3)	

* Post-hoc statistically significant differences Fisher's Exact Test; Bonferroni-adjusted $p < .05$

Table 2

Demographic and Practice Variables

	Total (N=141)	No Attempt (N=134)	Attempt (N=7)
	Mean (SD)	Mean (SD)	Median (Min---Max)
Age (years)	48.7 (9.3)	48.7 (9.5)	51.0 (37---59)
	N (%)	N (%)	N (%)
Age Interval			
< 35 years	7 (5.0)	7 (5.2)	0 (0.0)
35---44 years	37 (26.2)	36 (26.9)	1 (14.3)
45---54 years	62 (44.0)	57 (42.5)	5 (71.4)
55---64 years	29 (20.6)	28 (20.9)	1 (14.3)
>= 65 years	6 (4.3)	6 (4.5)	0 (0.0)
Male	128 (90.8)	123 (91.8)	5 (71.4)
White	124 (87.9)	118 (88.1)	6 (85.7)
Married	97 (68.8)	92 (68.7)	5 (71.4)
<i>N</i>	<i>135</i>	<i>128</i>	<i>7</i>
Trained in US	120 (88.9)	114 (89.1)	6 (85.7)
<i>N</i>	<i>128</i>	<i>121</i>	<i>7</i>
Solo Practice *	42 (32.8)	37 (30.6)	5 (71.4)

* Statistically significant difference Fisher's Exact Test, $p < 0.05$

Table 3

Practice and Clinical History Variables

	Total (N=141)	No Attempt (N=134)	Attempt (N=7)
	N (%)	N (%)	N (%)
<i>N</i>	139	132	7
Medical Board Involved	35 (25.2)	33 (24.8)	2 (33.3)
License Sanctions (Pre- FFD referral)	15 (10.8)	15 (11.4)	0 (0.0)
License Sanctions (Current at FFD)	26 (18.7)	26 (19.7)	0 (0.0)
PHP Monitoring Agreement (Pre-FFD)	22 (15.7)	19 (14.3)	3 (42.9)
PHP Monitoring Agreement* (Post-FFD)	35 (25.2)	30 (22.7)	5 (71.4)

* Statistically significant difference Fisher's Exact Test, $p < 0.05$

Table 4

Assessment Results

	Total (N=141)	No Attempt (N=134)	Attempt (N=7)
	N (%)	N (%)	N (%)
Axis I Diagnoses			
Anxiety Disorder	6 (4.3)	6 (4.5)	0 (0.0)
Cognitive Disorder	5 (3.5)	4 (3.0)	1 (4.3)
Mood Disorders	57 (40.4)	52 (38.8)	5 (71.4)
PTSD	4 (2.8)	4 (3.0)	0 (0.0)
Sexual Disorder	27 (19.1)	25 (18.7)	2 (28.6)
Substance Use Disorder	48 (34.0)	44 (32.8)	4 (57.1)
Alcohol	26 (18.4)	23 (17.2)	3 (42.9)
Opiates	19 (13.5)	17 (12.7)	2 (28.6)
Marijuana	3 (2.1)	3 (2.2)	0 (0.0)
Amphetamines	2 (1.4)	2 (1.5)	0 (0.0)
Cocaine	4 (2.8)	4 (3.0)	0 (0.0)
Benzodiazepine*	16 (11.3)	12 (9.0)	4 (57.1)
Other	4 (2.8)	4 (3.0)	0 (0.0)
Axis II Diagnoses			
Personality Disorder	46 (32.6)	45 (33.6)	1 (14.3)
<i>N</i>	<i>134</i>	<i>127</i>	<i>7</i>
Fit to Practice*	88 (65.7)	87 (68.5)	1 (14.3)

* Statistically significant difference Fisher's Exact Test, $p < 0.05$